

USSR

UDC: 539.374

BIGRER, I. A., SELIFONOVA, L. P., Moscow

"Three-Dimensional Stress State in Turbine Blades"

Kiev, Problemy Prochnosti, No 3, Mar 73, pp 7-10.

Abstract: An approximate theory of the three-dimensional stress state in turbine blades is studied, in which the hypothesis of flat cross sections is supplemented by solution of the related planar problem. As an example, the authors study determination of unstable stresses in a gas turbine blade. The equations are solved by the method of finite differences, the modulus of elasticity and Poisson's coefficient assumed constant for all points in the cross section. The influence of the three-dimensional stress state is significant in this case.

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- 75 -

AM0040719

UR 0482

1-70

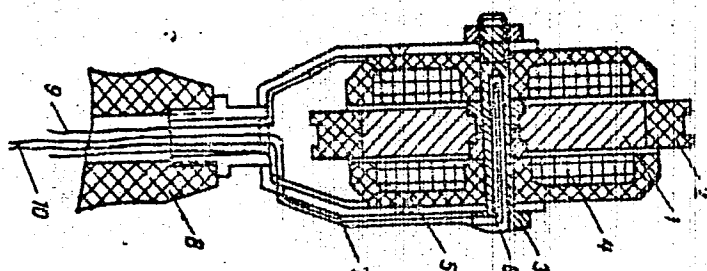
Soviet Inventions Illustrated, Section I. Chemical, Derwent,

241654 WELDING THERMOPLASTICS, using the illustrated device, which comprises the small roller (1) with a fluoroplastic covering (2), centre shaft (3), induction coil (4), mounted inside the body section of a heat-insulator (5), thermocouple (6), divided bracket (7) from the handle (8), with current-supply wires (9 and 10). The heat in the roller is created by the alternating magnetic field which is formed around the induction coil when the latter is switched on. The thermocouple, for maintaining control of the temp. of the roller, is

inserted down a hole in the centre of the fixed shaft. The roller is pressed against the surface of the thermoplastics to be welded, e.g. polyethylene. 3.7.67. as 1168690/25-27, SELIKHOV, B.M. and MIKHAYEV, V. I. (RUSSIA) Bul. 14/18.4.69. Class 39a² Int. Cl. B 29c.

19750360

LA0040719



19750361

LD

USSR

UDC: None

GROSS, Ye. F. (Deceased), PERMOGOROV, S. A., TRAVNIKOV, V. V., and
SEL'KIN, A. V.

"Kinetics of the Formation of Bonded Excitons in CdS Crystals"

Leningrad, Fizika Tverdogo Tela, vol 14, No 5, 1972, pp 1547-1548

Abstract: This brief communication is the sequel to an earlier article published by the authors named above in the same journal (vol 14, 1972, p 1388), in which they showed that the excitation of CdS crystals with a high probability of nonradiation recombination by monochromatic light creates monokinetic exciton distribution in the exciton zone. In the present communication an account is given of an investigation into the probability of formation of excitons bonded with neutral donors in CdS crystals as a function of the energy of the free excitons. The excitation spectra were obtained at a temperature of 4.2° K with equipment described in the earlier paper, and the results of their plot are shown.

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USSR

UDC 616.938.21-022.33+616.963.21-036.21

SELENOV, M. A., Institute of Poliomyelitis and Viral Encephalitis, Academy of Medical Sciences USSR

"Characteristics of the Epizootiology and Epidemiology of Rabies at the Present Time"

Moscow, Zhurnal Mikrobiologii Epidemiologii i Immunobiologii, No 11, 1972, pp 129-138

Abstract: The spread of rabies infection in the world in the 19th and 20th centuries is reviewed. Dogs and cats were the main infection carriers of rabies during the 19th century and up to World War II. But starting with 1948, and especially in the 1950's and 1960's wild foxes became the principal infection carriers. The epizootiology wave which started in 1948 in the USSR reached its peak in 1954, then again in 1956, 1966, and 1969. Up to 1958 dogs were main infection sources in the USSR. The percentage of the disease affecting dogs between 1948-1957 was 46.6-56%, but it decreased to 3.3% in 1969. Foxes were the sources of infection in 2.1% in 1946-1956, and it increased to 7 and 30-37.5% in 1958-1963 and 1966-1968, respectively, in the USSR. The unusual spread of rabies was observed in the RSFSR, the Ukraine, and Kazakhstan during the post World War II period. For the last 5-6 years a high percentage of domestic animals were victims of rabies infection transmitted by wild foxes.

USSR

SELIMOV, M. A., Zhurnal Mikrobiologii Epidemiologii i Immunobiologii, No 11, 1972, pp 129-138

The unusually high percentage of rabies spread by foxes, skunks, bats, and other small carnivorous animals is new in the epizootiology and epidemiology of rabies in Europe and North America. The unusual role of wild foxes in spreading the rabies infection is attributed to an unusual increase of their number, with a decreasing number of their natural enemies, wolves and eagles.

2/2

1/2 024

UNCLASSIFIED

PROCESSING DATE--09OCT70

TITLE--THE ROLE OF TOXINS OF CERTAIN SAPROPHYTIC MICROBES IN THE ETIOLOGY
OF EXPERIMENTAL NEUROPARALYTIC DISEASES -U-
AUTHOR--(03)-REZNIK, S.R., SELIMOV, M.A., SLABOSPITSKAYA, A.T.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL MIKROBIOLOGII EPIDEMIOLOGII I IMMUNOBIOLOGII, 1970, NR 4,
PP 81-86
DATE PUBLISHED--70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--BACTERIAL TOXIN, SOIL BACTERIOLOGY, BACTERIAL SPORE, VIRAL
VACCINE, RABIES, EXOTOXIN, GASTROINTESTINAL DISEASE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1990/1535

STEP NO--UR/0016/70/000/004/0081/0086

CIRC ACCESSION NO--AP0109595

UNCLASSIFIED

2/2 024

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0109595

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EXAMINATION OF 84 STRAINS OF BACTERIA, SAPROPHYTIC IN SOIL AERIAL MEDIUM AND ENCOUNTERED IN THE INTESTINE OF MAMMALS DEMONSTRATED THAT AMONG THE SPORE BEARING BACTERIA OF BAC. SUBTILIS MESENTERICUS GROUPS THERE WERE STRAINS WHICH PRODUCED SUBSTANCES OF THE EXOTOXIN TYPE; THESE SUBSTANCES CAUSED A PATHOLOGICAL PROCESS OF ENCEPHALOMYELITIS TYPE IN ADMINISTRATION TO LABORATORY ANIMALS. THE MENTIONED TOXINS WERE RESISTANT TO THE ACTION OF LOW CONCENTRATIONS OF PHENOL, PRODUCED A CUMULATIVE EFFECT IN TESTING ON ANIMALS, AND WERE CAPABLE OF PENETRATING FROM THE GASTROINTESTINAL TRACT INTO THE BLOOD AND BRAIN OF ANIMALS (RABBIT) DURING THE AGONAL STATE. SINCE DURING MAKING OF RABIES VACCINE THERE MAY OCCUR CONDITIONS AIDING THE ACCIDENTAL INTRODUCTION OF SUCH TOXINS INTO THE PREPARATION, AND ADDITIONAL CONTROL FOR TOXICITY OF THE VACCINE IS SUGGESTED.

UNCLASSIFIED

172 012 UNCLASSIFIED PROCESSING DATE--19SEP70
TITLE--ON RCT SUB40, MARKED FIXED RABIES VIRUS -U-
AUTHOR-(02)-SELIMOV, M.A., NIKITINA, L.F.
COUNTRY OF INFO--USSR
SOURCE--VOPROSY VIRUSOLOGII, 1970, NR 2, PP 161-165
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--RABIES VIRUS, TISSUE CULTURE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAHE--1990/0743 STEP NO--UR/0402/70/000/002/0161/0165
CIRC ACCESSION NO--AP0108949
UNCLASSIFIED

2/2 012

CIRC ACCESSION NO--AP0108949

UNCLASSIFIED

PROCESSING DATE--18SEP70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. FIXED RABIES VIRUS (SAD STRAIN) WAS PASSAGED SERIALY IN PRIMARY CULTURES OF SYRIAN HAMSTER KIDNEY AT 37DEGREESC FOR 47 PASSAGES, AT 32DEGREES FOR 31 PASSAGES AND AT 28-26DEGREES FOR 11 PASSAGES. THE "COLD" VARIANTS OF THE VIRUS WERE SHOWN TO MULTIPLY VERY POORLY AT HIGH TEMPERATURES (40DEGREESC) (RGT SUB40 PRIME NEGATIVE MARKER) BUT THE ORIGINAL VIRUS SHOWED QUITE ACTIVE REPRODUCTION (RGT SUB40 PRIME POSITIVE MARKER). COMPLETE CORRELATION WAS OBSERVED BETWEEN LOW REPRODUCTION ACTIVITY OF RABIES VIRUS IN SYRIAN HAMSTER KIDNEY CULTURE AT 40DEGREES AND ITS LOW VIRULENCE FOR LABORATORY ANIMALS.

UNCLASSIFIED

USSR

UDC 576.858.75.093.396.332

ZAYDES, V. M., NIKOLAYEVA, O. G., SELIMOVA, L. M., and BUKHINSKAYA, A. G.,
Institute of Virology imeni D. I. Ivanovskiy, Academy of Medical Sciences USSR,
Moscow

"The Role of Sendai Virus Nucleocapsid in Transcription of Viral RNA"

Moscow, Voprosy Virusologii, No 5, Sep/Oct 72, pp 602-608

Abstract: Sendai virus RNA-polymerase catalyzes incorporation of ribonucleoside triphosphates into an acid-insoluble material in vitro. The incorporation is linear for at least an hour. A portion of the synthesized substance is attached to the nucleocapsid. The bond is specific, and as soon as the growing chain matures into RNA, the molecule becomes free and leaves the structure. Similarly, virus RNA-polymerase promotes synthesis of virus specific RNA in Ehrlich ascites carcinoma cells very soon after these cells are infected with Sendai virus, and RNA transcription occurs in structures resembling virus nucleocapsid. It is concluded that Sendai virus nucleocapsid participates in transcription of virus RNA in vitro and in vivo.

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Materials

UDC 621.362.2

USSR

KAZANDZHAN, B. I., LOBANOV, A. A., SELIN, Yu. I., TSURIKOV, A. A.

"Electrical Conductivity and Thermoelectromotive Force of Tl_2Te and Tl_2Se in the Molten State"

Tr. Mosk. energ. in-ta (Works of the Moscow Power Engineering Institute), 1970, vyp. 75, pp 163-165 (from RZh-Elektrotehnika i Energetika, No 1, Jan 71, Abstract No 1A158)

Translation: The conductivity σ and thermoelectromotive force of Tl_2Te and Tl_2Se in the molten state are measured at temperatures from 700 to 1150°K. The width of the forbidden band is 0.75 eV for Tl_2Te and 1.02 eV for Tl_2Se . Two illustrations, bibliography of five titles.

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UDC 539.14+539.143

USSR

SELINOV, I. P.

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SELINOV, I. P.
"Isotopes. Vol. 1. Reference Tables Z = 1-62"
"Isotopye tablitsy Z = 1-62 (44 k. for tv

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SELINOV, I. P.
"Isotopes. Vol. 1. Reference Tables Z = 1-62"
Izotopy. T. 1. Spravochnyye tablitsy Z = 1-62 (cf. English above), Moscow, "Nauka", 1970, 623 pp, ill., 4 r., 44 k. for two books (from RZh-Fizika, No 3, Mar 71, Abstract No 3V124K)
The present edition consists of three volumes. The first two give the physical properties of stable and radioactive isotopes (Z = 1-62-105). The third volume contains a table of fundamental constants and a table of disintegration constants of radioactive isotopes.

Translation: The present edition consists of three volumes. The first two give the characteristics of the basic properties of stable and radioactive isotopes (first volume: $Z = 1-62$; second volume: $Z = 62-105$). The third volume contains the diagram "The periodic system of atoms and atomic nuclei", a table of fundamental constants, and a bibliography of experimental work from the time of discovery of radioactivity (1896) up to 1969. The edition is intended for specialists working in the field of nuclear physics, a large group of scientific and technical workers using isotopes in various fields of science and technology, and also for teachers, aspirants, and students of the appropriate specialties.

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ED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R00220282000

9. JAMES EUGENE KELLY, JR. 1971

QUC: 616-34-036.11-064.4:374(470.43)

Chair of Social Hygiene and
Epidemiology, Kyiv
University, 12-16
S. Stepanovskaya Street, 19
Kiev, USSR

The occurrence of outbreaks of acute infectious diseases in the city of Novosibirsk has been reduced by the implementation of the measures proposed by the Scientific Committee of the Kuzbass State University. The Committee has also conducted extensive epidemiological and epidemiological control measures and the epidemic and control of the disease by medical workers under the guidance and control of Party and Soviet bodies.

On 17 March 1971, the executive committee of the Council of Workers' Deputies adopted decision and instructions on "the need for a more active role of workers' deputies in the organization of the work of the enterprise and in the improvement of the living conditions of the population in 1971."

of the Ministry of Health, the Ministry of Education and the Ministry of the Interior. The Ministry of Health is responsible for the overall supervision of the sanitary and hygienic condition of the population, the Ministry of Education for the sanitary and hygienic condition of the schools, and the Ministry of the Interior for the sanitary and hygienic condition of the municipalities.

not unimportant the special propaganda of the party. The party is compelled to influence propaganda by medical workers. The party is compelled to influence propaganda by medical workers. The party is compelled to influence propaganda by medical workers.

Information regarding circulation and radio broadcast information for television and large newspaper and hygienic inform

boards of oblate, municipal, and
to wide broad propaganda
and acute internal research

... were charged to members again... practicing... and preventive measures against... Institute, practicing... and preventive measures against... twice a week. It was... fitting to o...

Institute of H/glycine and Institute of public health organizations at least once per year for distribution of disease and parturient administration for intestinal disease and acute intestinal

and passed to the courts for consideration. The suggestion of films on prevention of accidents at the state of feature film presentations.

administrations for trade, public catering and hygiene before the

Food industry and municipal services
increasing the responsibility of each member of

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USSR

ARTSISREYAKAYA, L. F., et al., Fizika Metallov i Metallovedeniye, Vol 33,
No 2, Feb 72, pp 377-382

ordered Ni_4Mo phase, twins without the twinning orientation can be observed.
At 800°C the domain structure represents coarse perpendicular twins in the
form of plates inside of which the anti-phase domains are grouped. Four
figures, 5 bibliographic references.

2/2

1/2 019
TITLE--STUDY OF THE TERNARY SOLID SOLUTIONS NI SUB3 (FE, V) -U-
UNCLASSIFIED
AUTHOR--SARKISYAN, R.S., SELISSKY, YA.P.
COUNTRY OF INFO--USSR
SOURCE--UKRAIN. FIZ. ZHUR. JAN., 1970, 15, (1), 127-129
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS
TOPIC TAGS--SOLID SOLUTION, ORDERED ALLOY ELASTIC MODULUS, ELECTRIC
CONDUCTIVITY MEASUREMENT, ALLOY COMPOSITION, NICKEL ALLOY, IRON
CONTAINING ALLOY, VANADIUM CONTAINING ALLOY, ALLOY STRUCTURE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1989/1240
CTRC ACCESSION NO--AP0107680
STEP NO--UR/0185/70/015/001/0127/0129
UNCLASSIFIED

PROCESSING DATE--11SEP70

UNCLASSIFIED

2/2 019

CIRC ACCESSION NO--AP0107680
ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE ORDERING CHARACTERISTICS OF
SOLID SOLUTIONS OF THE NI SUB3 (FE, V) TYPE WERE STUDIED BY ELECTRICAL
RESISTANCE AND ELASTIC MODULUS MEASUREMENTS OVER A WIDE TEMP. RANGE
(0-600DEGREESC.) AN ORDERED STRUCTURE OF THE NI SUB3 FE TYPE PERSISTED
IN ALLOYS CONTG. UP TO 13 AT. PERCENT V. AS THE V ROUNDED BY NI ATOMS
WAS SUPPLEMENTED BY ANOTHER STRUCTURE IN WHICH THE V ATOMS WERE
SURROUNDED BY NI, AT LEAST WITHIN THE FIRST COORDINATION SPHERE.

UNCLASSIFIED

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UDC 669.295:620.176.251.1:620.186.1

USSR

D'YAKOVA, M. A., BOGACHEV, I. N., BEZRUKOVA, A. K., and SELITSKAYA, S. I.,
Ural Polytechnical Institute

"Phase Conversions of Titanium Alloys at Low Temperatures"

Moscow, Metallovedeniye i Termicheskaya Obrabotka Metallov, No 10, 1970,
pp 36-38

Abstract: A study was made of the decomposition of the unstable β -solid solution of titanium alloys during cooling and plastic deformation at low temperatures. Two alloys were studied: one with 3.7% Al, 7.5% Mo (alloy A) with a temperature of beginning of martensite conversion of $+50^{\circ}\text{C}$, and the other with a high content of the transitional elements (alloy B) with a temperature of beginning of martensite conversion of below -196°C . Exposure to cold increases the strength properties of both types of alloys. Plastic deformation at low temperatures results in the formation of deformation martensite and increases the yield point and ultimate strength.

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UDC 539.23

USSR

POBEDONOSTSEV, L. A., SELITSKIY, Yu. A.

"Manufacture of Thin Nickel Foil"

Moscow, Priory i Tekhnika Eksperimenta, p 263

Abstract: A simple method is described for producing thin nickel foil, which can be used as substrate for targets and radioactive sources. The foil is produced by applying a thin layer of NaCl ($10-60 \text{ mg/cm}^2$) to a glass surface by evaporation by heat in a vacuum. Then this substrate is transferred to a heated plate, an Al foil mask is placed on it and they are heated together to 200°C . After evacuation of the installation to $(2-3) \cdot 10^{-2}$ torr, vapors of $\text{Ni}(\text{CO})_4$ are admitted through a filter. A needle valve is used to establish the pressure at $(1-2) \cdot 10^{-1}$ torr. After the required film thickness is built up, the glass is removed, cooled, then placed in water at room temperature. The Ni film will float to the surface of the water, from which it is lifted by a frame.

1/2 047
TITLE--BENDING OF A CONSOLE, CYLINDRICAL SHELL OF FIBERGLASS PLASTIC;
WEAKENED BY A ROUND CUT -U-
AUTHOR--(02)-PIROGOV, I.M., SELITSKIY, F.I.
COUNTRY OF INFO--USSR
SOURCE--MEKHANIKA POLIMEROV, VOL. 6, JAN.-FEB. 1970, P. 152-157
DATE PUBLISHED--70
SUBJECT AREAS--MATERIALS, PHYSICS, MECH., IND., CIVIL AND MARINE ENGR
TOPIC TAGS--FIBERGLASS, REINFORCED PLASTIC; CYLINDRIC SHELL STRUCTURE,
DIGITAL COMPUTER, COMPOSITE MATERIAL, STRESS LOAD, STRESS CONCENTRATION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FKAME--1092/1871
STEP NO--UK/0374/70/006/000/0152/0157
ACCESSION NO--AP0112651
UNCLASSIFIED

272 047

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0112851

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. STUDY OF THE STRESS CONCENTRATION IN THE REGION OF A ROUND HOLE IN THE CANTILEVER CYLINDRICAL SHELL MADE OF FIBERGLASS REINFORCED COMPOSITE SUBJECTED TO A CONCENTRATED LOAD ON THE FREE SUPPORTED END. BUBNOV METHOD TOGETHER WITH A DIGITAL COMPUTER WERE USED FOR SOLVING THIS PROBLEM. CALCULATED RESULTS ARE EXPERIMENTALLY VERIFIED USING SHELLS OF FIBERGLASS REINFORCED COMPOSITE.

FACILITY: VSESOUZNYI ZAOCHNYI POLITEKHNICHESKII INSTITUT,
MOSCOW, USSR.

UNCLASSIFIED

1/2 013 UNCLASSIFIED
TITLE--LEAD ACID BATTERY ELECTRODES -U-

PROCESSING DATE--16OCT70

AUTHOR--(05)-YEMEL'YANOV, N.M., SMOLKOVA, V.S., ROMANOVA, I.L., SELITSKIY,
I.A., RUSIN, A.I.
COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 262,200
REFERENCE--OTUR'YTIYA, IZOBRET., PROM. OBRATZSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--26JAN70

SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR.

TOPIC TAGS--PATENT, BATTERY ELECTRODE, LEAD, LEAD OXIDE, SULFURIC ACID

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1990/1782

STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0109743

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--16OCT70

2/2 013

CIRC ACCESSION NO--AA0109743

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TITLE ELECTRODES ARE PREPD. BY MIXING PB OXIDES WITH H SUB2 SU SUB4, SMEARING THE MIST. ONTO A LATTICE, DRYING, FORMING, REPEATED DRYING, AND INTRODUCING A BINDER. THE DRIED OUT PLATES ARE SATD. IN THE BINDER SOLN., WITH SUBSEQUENT REMOVAL OF THE SOLVENT.

FACILITY: SCIENTIFIC RESEARCH STORAGE BATTERY INSTITUTE.

UNCLASSIFIED

1/2 013
UNCLASSIFIED
TITLE--ANOMALOUS ANGULAR DISTRIBUTION OF FRAGMENTS FROM THE FISSION OF
RADIUM BY 14-16 MEV NEUTRONS -U-
AUTHOR--(05)-BABENKO, YU.A., NEILOV, YU.A., PLESKACHEVSKIY, L.A.,
SELITSKIY, YU.A., FUNSHTEYN, V.B.
COUNTRY OF INFO--USSR
SOURCE--YAD. FIZ. 1970, 11(5), 1006-11
DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS, NUCLEAR SCIENCE AND TECHNOLOGY
TOPIC TAGS--ANGULAR DISTRIBUTION, NUCLEAR FISSION, RADIUM ISOTOPE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3008/0577

STEP NO--UR/0367/70/011/005/1006/1011

CIRC ACCESSION NO--AP0137662

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--27NOV70

2/2 013

CIRC ACCESSION NO--AP0137662

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. FRAGMENT ANGULAR DISTRIBUTIONS FOR THE FISSION OF PRIME226 RA BY N WITH ENERGIES 12.6-19.5 MEV WERE MEASURED. AS THE SOURCE OF N, THE REACTIONS (D,D,N) PRIME3 HE AND T(D,N) PRIME4 HE WERE USED. THE ANOMALOUS SHAPE OF THE DISTRIBUTION, MANIFESTING ITSELF AS A FRAGMENT YIELD AT AN ANGLE OF SIMILAR TO 60 DEGREES AT E SUBN EQUALS 14.6-15.6 MEV, IS EXPLAINED AS DUE TO THE "CHANNEL" STRUCTURE OF THE FISSION BARRIER OF THE PRIME226 RA NUCLEI PRODUCED FROM PRIME 227 RA AFTER EVAPG. 2 N. THE FISSION BARRIER OF PRIME226 RA IS 7.0 PLUS OR MINUS 0.5 MEV. THE TOTAL CROSS SECTION VARIES SLIGHTLY FROM 21 TO 33 MB IN THE ENERGY INTERVAL E SUBN EQUALS 15.6-19 MEV. EXPTS. PERFORMED ON PRIME233 U GAVE A NEG. ANSWER TO THE QUESTION OF THE EXISTENCE OF ANOMALOUS ANGULAR DISTRIBUTIONS FOR FISSION OF OTHER NUCLEI.

UNCLASSIFIED

USSR

BLAZHIN, V. D.; SELIVANENKO, A. S. (Lebedev Physics Institute, USSR Academy of Sciences, Moscow)

"Superconductivity of Semiconductor Crystals Placed in the Beam of a Laser"

Leningrad, Solid State Physics; November, 1970; pp 3229-33

ABSTRACT: The model of a highly alloyed semiconductor with a complex conduction band is studied theoretically. Electron scattering in the conduction band as a consequence of Coulomb interaction with electrons of the valence band, at the same time taking into account the effect of a light beam, is calculated. It is shown that under given conditions such scattering can lead to the occurrence of superconductivity at temperatures $T \sim 100^\circ\text{K}$.

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1/2 043 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--EFFECT OF HIGH POWER LASER LIGHT ON ELECTRON PHONON AND ELECTRON
IMPURITY INTERACTIONS IN SEMICONDUCTORS -U-
AUTHOR-(02)-BLAZHIN, V.D., SELIVANENKO, A.S.

COUNTRY OF INFO--USSR

SOURCE--FIZ. TEKH. POLUPROV. 1970, 4(2), 233-6

DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--LASER BEAM, ELECTRON PHONON INTERACTION, SEMICONDUCTOR
IMPURITY, SEMICONDUCTOR CONDUCTIVITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1987/1987

STEP NO--UR/0449/70/004/002/0233/0236

CIRC ACCESSION NO--AP0105061

UNCLASSIFIED

2/2 043

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0105061

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF A STRONG LIGHT FIELD ON THE INTERACTION OF ELECTRONS WITH OPTICAL PHONONS AND WITH IONIZED IMPURITIES IS CONSIDERED. EXPRESSIONS ARE OBTAINED FOR THE PROBABILITIES OF THE RESP. PROCESSES, AND THE RESISTANCE OF SEMICONDUCTORS AS DETD. BY SUCH MECHANISMS IS CALCD. ONLY THE CONDUCTION BAND IS TAKEN INTO ACCOUNT IN THE CALCNS. FACILITY:
FIZ. INST. IM. LEBEDEV, MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC: 615.832.9.07:612.563

PORTNOY, V. F., SELIVANENKO, V. T., and AYZENBERG, L. A., Laboratory of Extracorporeal Circulation, Institute of Surgery imeni A. V. Vishnevskiy, Academy of Medical Sciences USSR, Moscow

"Temperature Topography of the Body Following the Use of Two Different Methods of Artificial Hypothermia"

Moscow, Eksperimental'naya Khirurgiya i Anesteziologiya, No 6, Nov/Dec 70, pp 83-88

Abstract: Dogs were chilled by immersion in cold water or by hyperthermic perfusion. In the animals chilled by immersing the lower part of the body in cold water, the lowest temperature was recorded in the regions that came in direct contact with the water (subcutaneous tissue and muscles of the femur). The temperature of the regions not immersed in the water (chest, head) was higher and equal to that of the viscera, the difference between them not exceeding 1.5°C. External chilling thus creates a gradient between the "central" and "peripheral" temperatures and between the immersed and nonimmersed parts of the body. Perfusion of chilled blood resulted in fairly uniform cooling of the viscera, the temperature gradient not exceeding 2°C, but there was a marked difference in the temperature between the viscera and external tissues (4 to 6°C).

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USSR

UDC 576.858.5.095.383

SELIVANOV, A. A., KOVALEVA, T. P., AKSENOV, O. A., YURLOVA, T. I., LYSOV, V. V.,
KRYLOV, V. A., and SMORODINTSEV, A. A., All-Union Scientific Research Institute
of Influenza, Ministry of Health USSR, Leningrad

"Anti-Interference Effect of Adenoviruses"

Moscow, Voprosy Virusologii, No 5, Sep/Oct 72, pp 574-577

Abstract: Crude adenoviruses, serotype 1, 4, and 7 adenoviruses heated to 56°C for 30 min, and purified pentone antigen of serotype 4 suppress induction of interferon by influenza A2 Hong Kong Virus and inhibit interference between influenza A2 virus and vesicular stomatitis virus in chick embryo fibroblasts. Adenoviruses treated with trypsin, fibrantigen, and hexone-antigen no longer have this capacity. There is a good direct correlation between the cytotoxic, anti-interference, and anti-interferon-inducing capacities of the above-mentioned strains of adenoviruses. None of these strains stimulates reproduction of vesicular stomatitis virus. It is postulated that anti-interference is due not only to inhibition of interferon production but also to reduction of the activity of previously produced interferon.

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UDC 576.858.5.06:576.858.5.097.39].083.1

USSR

SELIVANOV, A. A., LYSOV, V. V., YURLOVA, T. I., and AKSENOV, O. A., All-Union Scientific Research Influenza Institute, Ministry of Health USSR, Leningrad

"A Comparison of Two Methods of Titrating Adenoviruses"

Moscow, Voprosy Virusologii, No 5, 1971, pp 600-603

Abstract: While there is a linear relationship between the titer of adenovirus and incubation time, the ambiguity of the results makes it difficult to compare the strain properties of the agent. Experiments with adenoviruses serotypes 1 and 2 adapted in different degrees to low incubation temperatures in guinea pig kidney tissue culture showed that such comparison can be conveniently made by approximating the titer-incubation time relationship from the sum of the least squares. The accurately reproducible results of the approximation, the regression coefficient of cytopathogenic and cytotoxic activities, correlate with other biological properties and can be used as markers to differentiate adenovirus variants of the same serotype.

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USSR

UDC 576.858.5.095/.097

KOVALEVA, T. P., YURLOVA, T. I., BOLDASOV, V. K., LYSOV, V. V., RUDENKO, L. G., AKSENOV, O. A., and SELIVANOV, A. A. All Union Scientific Research Institute of Influenza, Ministry of Health USSR, Leningrad.

"Biological Properties of Two Strains of Adenovirus Serotype 4"

Moscow, Voprosy Virusologii, No 6, Nov/Dac 71, pp 700-703

Abstract: A comparative study of normal and attenuated strains of adenovirus serotype 4 revealed a number of significant differences.. While at the optimum culture growth temperature of 37°C, both strains reproduce at the same rate, at 28°C the attenuated strain proliferates much faster and at 40°C much slower than the parent strain. While both strains are almost equally sensitive to human leukocytic interferon, the attenuated strain is significantly more sensitive to nonspecific thermolabile inhibitors, and has a much higher interferon-stimulating and interference activity and a much lower cytotoxic activity. After experimental inoculation of human subjects, both strains cause a rapid, fourfold increase in serum antibody concentration. However, the disease induced by the attenuated strain is considerably less severe and of shorter duration than that induced by the parent strain.

1/1

UDC 619:614.47

USSR

SELIVANOV, A. V., Kazan' Veterinary Institute, Kazan'

"The Aerosol Immunization of Animals"

Moscow, Veterinariya, No 5, May 73, pp 58-60

Abstract: Introduction into the respiratory system of various vaccines and also a synthetic polynucleotides induces the formation of immunoglobulin A and of interferon in the salivary glands and in the mucosa of the nose, nasopharynx, trachea, bronchi, and the intestine. Experimental immunization of piglets against Aujeszky's disease with an aerosol virus vaccine was more effective than intramuscular or subcutaneous immunization. It was established that aerosol immunization does not bring about an intensive suppression of the factors of natural immunity, as does peroral immunization. Comparison of aerosol and subcutaneous immunization with tetanus and diphtheria toxoids, live STI vaccine, hog cholera vaccine, inactivated vaccines against ornithosis and tick-borne encephalitis, and other vaccines indicated that the sensitizing and toxic effects of the vaccines were lower on aerosol than subcutaneous administration, while a high level of immunity was produced.

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USSR

SELIVANOV, A. V., Veterinariya, No 5, May 73, pp 58-60

In view of the fact that young animals are principally immunized at farms, the reduction of pain, harmful reactions, and stress on aerosol administration of vaccines as compared with parenteral administration is of especial importance. Good results were obtained by applying combined vaccines (against brucellosis and anthrax; hog cholera and erysipelas; hog cholera, erysipelas, and Aujeszky's disease) in the form of aerosols. Aerosol immunization is of particular value because it can be applied on a mass scale with the result that infectious diseases are effectively prevented and rapidly eradicated.

2/2

USSR

UDC 619:616.9-022.7+636.2+636.3+636.4+636.52/.58

SELIVANOV, A. V.; MARINKOVA, V. V.; RYZHKOVA, L. P.

"Comparative Study of the Immunity and Vaccinal Reaction of Cattle Immunized With Vaccine from Brucella Strain No 19 by Aerosol and Subcutaneous Methods"

V sb. Sb. nauchn. rabot. Sib. n.-i. vet. in-t (Siberian Scientific Research Veterinary Institute -- Collection of Scientific Works), No 17, 1970, pp 22-28 (from RZh-58. Zhivotnovodstvo i Veterinariya, No 4, Apr 71, Abstract No 4.58.630)

Translation: The level of immunity in animals vaccinated via aerosol 6-16 months after inoculation (upon infection in the conjunctiva with two and twenty times the infective dose of virulent Brucella) was not lower than in animals immunized subcutaneously with strain No 19 in a dose of 60 billion cells. Tests were conducted in an infection during the normal duration and development of brucellosis. Aerosol immunization of cattle with strain 19 vaccine is harmless and produces shifts in organs and tissues rich in lymphoid elements indicating an active immunological process.

1/1

1/2 027 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--THE VIABILITY OF THE BUK VACCINAL STRAIN OF AUJESZKY'S DISEASE
VIRUS IN AEROSOL -U-
AUTHOR-(03)-SELIVANOV, A.V., KHASANOV, CH.G., KAMALOV, G.KH.
COUNTRY OF INFO--USSR
SOURCE--VETERINARIYA, 1970, NR 2, PP 34-36
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--VIRUS, INFECTIOUS DISEASE, BIOLOGIC AEROSOL, VIRULENCE, TISSUE CULTURE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3003/1213

STEP NO--UR/0346/70/000/002/0034/0036

CIRC ACCESSION NO--AP0130223

UNCLASSIFIED

2/2 027

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0130223

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE BUK VACCINAL STRAIN OF AUJESZKY'S DISEASE VIRUS IN AEROSOL LOSES ITS ABILITY TO INFECT A CULTURE OF CHICK EMBRYO CELLS, BUT RETAINS ITS VIRULENCE FOR RABBITS AND GUINEA PIGS. RABBITS AND GUINEA PIGS ARE SENSITIVE MODEL FOR STRAIN BUK VACCINAL VIRUS UPON INTRAMUSCULAR OR AEROSOL ADMINISTRATION. AEROSOL GENERATOR PEG, TGU, 66 WITH PRESSURE OF 2.5 ATM AND FEED OF 2 ML-MIN OF VACCINAL SUSPENSION CREATES A STABLE, FINELY DISPERSED AEROSOL (PARTICLE SIZE NOT GIVEN). THE VIRAL DOSE ASPIRED BY THE ANIMALS WAS CALCULATED ACCORDING TO THE FORMULA $D = C \times V \times P \times T$, WHERE C IS THE CONCENTRATION OF VIRAL AEROSOL (IN TCID₅₀-ML) IN THE AEROSOL CHAMBER, V IS THE RESPIRATORY VOLUME (IN ML-MIN PER 1 G OF WEIGHT), P IS THE WEIGHT OF THE ANIMAL IN GRAMS, AND T IS THE TIME OF CONTACT WITH THE AEROSOL (IN MIN). FACILITY: KAZAN VETERINARY INSTITUTE.

UNCLASSIFIED

USSR

SELIVANOV, B. I.

"Listing of Homogeneous Hypergraphs with Simple Cyclical Structure"

Kombinator. Analiz. [Combinatorial Analysis -- Collection of Works], No 2, Moscow, 1972, pp 60-67 (Translated from Referativnyy Zhurnal Kibernetika, No 6, 1973, Abstract No 6V376, by A. Lapshin).

Translation: Suppose $t_r^{(m)}$ and $p_r^{(m)}$ are numbers of m -trees and m -cycles with r lines; $r \geq 0$; $q_{rp}^{(m)}$ is the number of root m -forests with p connection components, having a total of r lines.

This work proves that

$$q_{rp}^{(m)} = \frac{[r(m-1)+p]! [r(m-1)+p]^{r-1}}{r! (p-1)! [(m-1)!]^r};$$

$$t_r^{(m)} = \frac{[(m-1)r]! [(m-1)r+1]^{r-1}}{r! [(m-1)!]^r};$$

$$p_r^{(m)} = \sum_{k=2}^r p_{rk}^{(m)} = \frac{[r(m-1)]!}{2 [(m-2)!]^r} \sum_{k=2}^r \frac{r^{r-1}}{r^k (r-k)!}.$$

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Selivanov, B. I., Kombinator. Analiz., No 2, Moscow, 1972, pp 60-67.

where $p_{rk}^{(m)}$ is the number of m cycles having a unique cycle of length k ,
 $m \geq 2$.

USSR

SELIVANOV, B. I.

"The Generating Function of One Statistics in a Polynomial Plan with Denumerable Number of Results"

Kombinator. Analiz. [Combinatorial Analysis -- Collection of Works], No 2, Moscow, 1972, pp 11-16 (Translated from Referativnyy Zhurnal Kibernetika, No 6, 1973, Abstract No 6V357, by A. Lapshin).

Translation: Suppose $\xi_1, \xi_2, \dots, \xi_n$ is a sequence of independent, identically distributed random quantities, taking on not over a denumerable number of values $\alpha_1, \alpha_2, \dots, \alpha_n, \dots$ with probabilities $p_1, p_2, \dots, p_n, \dots$ respectively. For a fixed integer $m \geq 2$ and each $n = 1, 2, \dots$, a study is made of the statistics $\xi_n^{(m)}$:

$$\xi_n^{(m)} = \begin{cases} 0, & \text{if } n < m, \\ \sum_{1 \leq j_1 < j_2 < \dots < j_m \leq n} I(A(j_1, j_2, \dots, j_m)), & \text{if } n \geq m, \end{cases}$$

where $I(A(j_1, j_2, \dots, j_m))$ is the indicator of event $A(j_1, j_2, \dots, j_m) =$

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Selivanov, B. I., Kombinator. Analiz., No 2, Moscow, 1972, pp 11-16.

$= \{\xi_{j_1} = \xi_{j_2} = \dots = \xi_{j_m}\}, 1 \leq j_1 < j_2 < \dots < j_m \leq n$, where $P(A(j_1, j_2, \dots, j_m)) =$

$= \sum_{i=1}^m p_i^m = q_m$.

If, after n tests, the value of a_i has appeared x_i times, we obviously have:

$$\xi_n^{(m)} = \sum_{i=1}^m \binom{x_i}{m} = \frac{1}{m!} \sum_{i=1}^m x_i (x_i - 1) \dots (x_i - m + 1).$$

Let us represent $Q_{nk}^{(m)} = P\{\xi_n^{(m)} = k; 0 \leq k \leq \binom{n}{m}\}; n = 1, 2, \dots;$

$$Q_{1,0}^{(m)} = Q_{2,0}^{(m)} = \dots = Q_{m-1,0}^{(m)} = 1.$$

By definition, we assume $Q_{0,0}^{(m)} = 1$. Relative to the generating function

$$Q^{(m)}(z, y) = \sum_{n=0}^{\infty} \sum_{k=0}^{\binom{n}{m}} Q_{nk}^{(m)} y^k \frac{z^n}{n!}$$

the author proves the following

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Selivanov, B. I., *Kombinator. Analiz.*, No 2, Moscow, 1972, pp 11-16.

Theorem. The generating function $Q^{(m)}(z, y)$ satisfies the formal relationships

$$Q^{(m)}(z, y) = \exp \left\{ \sum_{n=1}^{\infty} q_n d_n^{(m)}(y) \frac{z^n}{n!} \right\} = \\ = \prod_{i \geq 1} \left[1 + \sum_{h=1}^{\infty} y \binom{n}{h} \frac{(z^n)^h}{h!} \right],$$

where

$$d_n^{(m)}(y) = \sum_{r=0}^{\binom{n}{m}} \gamma_{nr}^{(m)} (y-1)^r = n! \text{Coef}_z \left[\ln \left(1 + \sum_{n=1}^{\infty} y \binom{n}{m} \frac{z^n}{n!} \right) \right],$$

in particular

$$d_n^{(m)}(0) = n! \text{Coef}_z \left[\ln \left(1 + z + \frac{z^2}{2!} + \dots + \frac{z^{m-1}}{(m-1)!} \right) \right],$$

and $\gamma_{nr}^{(m)}$ is the number of homogeneous rank m hypergraphs with n points and r lines.

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USSR

Selivanov, B. I., Kombinator. Analiz., No 2, Moscow, 1972, pp 11-16.

Result. Let us assume $Q_0^{(m)}(y) = 1$, $Q_n^{(m)}(y) = \sum_{r=0}^n Q_{nr}^{(m)} y^r$, $n=1, 2, \dots$. Then we have the recurrent relationship

$$Q_{n+1}^{(m)}(y) = \sum_{l=0}^n \binom{n}{l} q_{l+1} d_{l+1}^{(m)}(y) Q_{n-l}^{(m)}(y), \quad n=0, 1, 2, \dots$$

where

$$d_1^{(m)}(y) = 1, \quad d_{n+1}^{(m)}(y) = y \binom{n+1}{m} - \sum_{k=1}^n \binom{n}{k} y \binom{k}{m} d_{n-k+1}^{(m)}(y),$$

$$n=1, 2, \dots$$

(See also RZhMat, 1972, 1V529).

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1/2 013 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--SPECTROPHOTOMETRIC STUDY OF SULFUR SELENIUM, SULFUR TELLURIUM, AND
SELENIUM TELLURIUM SYSTEMS IN THE VAPOR PHASE -U-
AUTHOR-(02)-CHERNOZUBOV, YU.S., SELIVANOV, G.K.
COUNTRY OF INFO--USSR
SOURCE--ZH. FIZ. KHIM. 1970, 44(3), 830
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS, CHEMISTRY
TOPIC TAGS--SPECTROPHOTOMETRIC ANALYSIS, UV SPECTRUM, SULFUR COMPOUND,
SELENIUM, TELLURIUM
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1996/1692 STEP NO--UR/0076/70/044/003/0830/0830
CIRC ACCESSION NO--AP0118670
UNCLASSIFIED

2/2 013

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0118670

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DIFFERENTIAL UV SPECTRA OF S PLUS SE, S PLUS TE, AND SE PLUS TE VAPOR MIXTS. WERE MEASURED AT 185-700 MMU AND AT 400-1000DEGREES. THE RESULTING PATTERNS WERE A SUM OF THE PURE COMPONENT ONES WITH ADDNL. MAX. AT 310, 360, AND 370 MMU CORRESPONDING TO COMPS. SES, TES, AND SETE, RESP. SES WAS STABLE AT 700-1000DEGREES AND SETE AND TES DISSOCD. SMALLER THAN 900DEGREES.

UNCLASSIFIED

USSR

UDC 21.314.61

SELIVANOV, I.A.

"Investigation Of Electromagnetic Processes In Intermittent Operating Conditions Of [Semiconductor] Rectifier Converters"

Sb.nauchn. tr. Magnitogorsk. gorno-metallurg. in-t (Collection Of Scientific Works Of The Magnitogorsk Mining-Metallurgical Institute), 1970, Issue 81, pp 18-27 (from RZh--Elektronika i yeye primeneniye, No 4, April 1971, Abstract No 4B634)

Translation: Regimes of intermittent currents are considered for 3-phase null and bridge circuits, a 6-phase null circuit, and a 6-phase circuit with an equalizing reactor operating on counter-emf (d-c motor). Equations are obtained which make it possible to compute the instantaneous and mean value of the current and emf of the motor. It is shown that for a regime of intermittent currents, conditional transfer of all the inductance of an a-c circuit and the primary winding of a transformer into the secondary circuit of the transformer is permissible. A.S.

1/1

1/2 020 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--A PURIFICATION OF TIN AND INDIUM BY PROGRESSIVE FREEZING -U-
AUTHOR--(02)-KIRGINTSEV, A.N., SELIVANOV, I.M.
COUNTRY OF INFO--USSR
SOURCE--IZVESTIYA SIBIRSKOGO OTDELENIYA AKADEMII NAUK SSSR, NO 4, SERIYA
KHIMICHESKIKH NAUK, 1970, NR 2, PP 57-61
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR
TOPIC TAGS--TIN, INDIUM, ZONE MELTING, METAL PURIFICATION, SILVER, COPPER,
BISMUTH, FREEZING
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1993/0580 STEP NO--UR/0289/70/000/000/0057/0061
CIRC ACCESSION NO--AP0113471
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--13NOV70

2/2 020

CIRC ACCESSION NO--AP0113471

ABSTRACT/EXTRACT--(U) CP-0- ABSTRACT. A DEVICE FOR BULK PURIFICATION BY PROGRESSIVE FREEZING IS WRITTEN. A DISTRIBUTION OF SILVER, COPPER AND BISMUTH IS STUDIED FOR PROGRESSIVE FREEZING OF BULK TIN (UNDER 110 KG). THE PECULIARITIES OF A PURIFICATION TIN AND INDIUM BY PROGRESSIVE FREEZING ARE DISCUSSED. FACILITY: INSTITUT NEORGANICHESKOY KHIMII SO AN SSSR, NOVOSIBIRSK.

UNCLASSIFIED

Converters and Transducers

UDC: 534.232-8

USSR

BOLODIN, B. L., NEVSKIY, YU. YE., SELIVANOV, L. V., Novosibirsk

"Measuring the Amplitude-Frequency Characteristics of Wide-Band Ultrasonic Converters"

Novosibirsk, Avtometriya, No 3, 1970, pp 65-69

Abstract: Measurement of the amplitude-frequency characteristics (conversion losses as a function of frequency) of wide-band diffusion converters entails certain difficulties since there are no standard instruments for measuring this parameter. The authors discuss these difficulties for the case of an ultrasonic converter. The measurement procedure is based on determining the characteristic for a known load impedance, and using a simple formula to compute the characteristic for any other load impedance. A radio pulse voltage signal is sent to the input of the converter where it is transformed to an acoustic signal which is propagated through an acoustic line, reflected from the free end of the line, and sent again to the converter, where it is transformed to a radio pulse output signal. Absorption of the ultrasonic wave takes place as it is propagated through the acoustic line. The amount of absorption is proportional to the delay time. To eliminate the error introduced by this absorption, the acoustic line must be made from a low-absorption material and the delay time must be minimized.

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USSR

BOLODIN, B. L., et al, Avtometriya, No 3, 1970, pp 65-69

Methods of accomplishing these goals are discussed. An instrument for measuring the amplitude-frequency characteristics of wide-band ultrasonic converters is described and a block diagram of the device is given. The proposed instrument can be used to study the amplitude-frequency characteristics of ultrasonic converters in the 30-150 MHz range in the pulse mode, the duration of probe pulses being 1-1.5 usec. Sensitivity recovery time is 3-4 usec. Maximum error is no more than ± 1.9 DB.

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172 012 UNCLASSIFIED PROCESSING DATE--09OCT70
TITLE--INCREASING THE RELIABILITY OF DIGITAL PROGRAM CONTROL OF A MACHINE
TOOL -U-
AUTHOR--(02)-SERGIYEVSKIY, L.V., SELIVANOV, N.P.
COUNTRY OF INFO--USSR
SOURCE--MOSCOW, STANKI I INSTRUMENT, NO 3, 1970, PP 7-8
DATE PUBLISHED-----70
SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR
TOPIC TAGS--ELECTRIC EQUIPMENT, HYDRAULIC EQUIPMENT, AUTOMATIC CONTROL
SYSTEM, MACHINE TOOL COMPONENT, DIGITAL SYSTEM
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1993/1769 STEP NO--UR/0121/70/000/003/0007/0008
CIRC ACCESSION NO--AP0114268
UNCLASSIFIED

2/2 012

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0114268

ABSTRACT/EXTRACT--(U) GP-U- ABSTRACT. ACCORDING TO THE AVAILABLE STATISTICAL MATERIAL, THE MAJORITY OF FAILURES OF MACHINE TOOLS WITH DIGITAL PROGRAM CONTROL IS DUE TO CAUSES ORIGINATING IN THE ELECTRONIC DEVICES AND IN THE ELECTRICAL EQUIPMENT, AS WELL AS IN THE TAPE DRAWING MECHANISM AND THE HYDRAULIC DRIVE OF THE MACHINE TOOL. REPAIRS ON THE HYDRAULIC FACILITIES, THE MECHANICAL SUBASSEMBLIES, AND THE ELECTRICAL EQUIPMENT ARE THE MOST LABOR INTENSIVE OPERATIONS. A REPORT IS GIVEN CONCERNING THE MEASURES TAKEN TO INCREASE THE RELIABILITY OF THE DIGITAL PROGRAM CONTROL SYSTEM AND TO DECREASE THE TIME REQUIRED FOR ELIMINATING DEFECTS IN IT.

UNCLASSIFIED

USSR

UDC 621.315.592(038.8)

KISELEV, A. M., LEZHEBOKOV, I. I., NAROYCHIK, S. S., NIKOLAYEV, A. A., OSOVSKIY, M. O., SELIVANOV, P. YA., SHKLYAREVSKIY, V. K.

"Procedure for Automatic Regulation of the Process of Noncrucible Zone Melting"

USSR Author's Certificate No 276016, Filed 24 May 68, Published 6 Oct 70
(from RZh-Metallurgiya, No 4, Apr 71, Abstract No 46480)

Translation: A procedure is introduced for automatic regulation of the process of noncrucible zone melting by keeping the ingot diameter constant by means of a signal received as a result of measuring the effect of the projection of the zone on a photoreceiver for controlling the ingot diameter. To improve accuracy of regulation, a profile of the zone located directly on the crystallization front is projected on the photoreceiver for controlling the diameter of the ingot by means of a crystallization-front tracking system.

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USSR

UDC 621.382.002

SELIVANOV, N.V.

"Study Of Thermal Conditions Of Microminiature Rectifier Modules"

Vestn. Kiyev. politekhn. in-ta. Ser. radioelektron. (Bulletin Of Kiyev Polytechnical Institute. Radioelectronics Series), 1972, No 9, pp 105-107 (from RZh:Elektronika i yeye primeneniye, No 9, Sept 1972, Abstract No 9B412)

Translation: The design is described of microminiature rectifier modules developed on the basis of noncased [beskorpusnyy] experimental diodes of average power. The thermal conditions of microunits [mikrouzel] are experimentally studied and methods of increasing the power-carrying capacity of a d-c load are demonstrated. 2 ill. 2 ref. Summary.

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USSR

UDC 536.46:533.6

GLUSHKOV, V. Ye., SELIVANOV, S. Ye., FEDOSEYEV, V. A., TODES, O. M.

"Thermal Combustion of Metal Particles"

V sb. Fiz. aerodispersn. sistem. Vyp. 5 (Physics of Aerodisperse Systems. No. 5 -- Collection of Works), Kiev, Kiev University, 1971, pp 65-71 (from RZh-Mekhanika, No 6, Jun 72, Abstract No 6B893)

Translation: The period of induction is obtained in implicit form as a function of the temperature of the medium T , particle size d and the functional relationships $t_i(d)$, $T = \text{const}$, and $t_i(T)$, $d = \text{const}$ are analyzed. The relationship $t_i(d)$ in explicit form shows that as $d \rightarrow d_0$, where d_0 is the minimum dimension of the particles for which the particles still ignite, $t_i \rightarrow \infty$ and for a sufficiently large d increases in proportion to d . That particle dimension d^* is found for which the period of induction reaches the minimum value. It was found that $d^* \approx 1.5 d_0$. It follows from the relationships found for $t_i(T)$ that t_i increases monotonically with a decrease in T and tends toward infinity as $T \rightarrow T_0$ (combustion temperature). The dependence of "conventional" combustion temperatures for finite periods of induction on particle size was investigated. Authors abstract.

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USSR

UDC 669.046.5

UDC 669.046.5

PETROV, B. S., VISHKAREV, A. F., TYURIN, Ye. I., DANILIN, V. I.,
SELIVANOV, V. M., and YAVOYSKIY, V. I.

"Degree of Oxidation of Stainless Steels With Oxygen Blowing"

Moscow, V sb. "Sovremennyye problemy kachestva stali" (MTSiS) (Collection of Works. Modern Problems of Steel Quality) (Moscow Institute of Steel and Alloys), Izd-vo "Metallurgiya," No 61, 1970, pp 196-198

Abstract: Results are presented of a study on the degree of bath oxidation with oxygen blowing during decarburization at less than 0.20% C content (nickel-free steels with 6-8 and 14-16% Cr and steels with 14-16% Cr, and 11 and 30% Ni). It is established that the degree of metal oxidation depends strictly on carbon concentration, although the oxidation level is determined by the initial Cr and Ni concentrations. 1 figure, 2 references.

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USSR

UDC 669.046.5

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ANSHELES, I. I., FEDOSEYEV, V. V., OYSK, G. N., YEGOROV, A. V., SOROKIN, S. P.,
TYURIN, Ye. I., DANILIN, V. I., SELIVANOV, V. M., STYKOV, S. S., ZYRYANOV,
Yu. Ye., and BALDAYEV, B. Ya.

"Use of Electromagnetic Stirring in Vacuum Melting of Steel in a Ladle"

Moscow, V sb. "Sovremennyye problemy kachestva stali" (MISI), (Collection
of Works. Modern Problems of Steel Quality) (Moscow Institute of Steel and
Alloys), Izd-vo "Metallurgiya," No 61, 1970, pp 222-227

Translation of Abstract: Brief technical characteristics are given of the
electromagnetic stirring of steel in a ladle. Data are presented on the
effect of electromagnetic metal stirring on the uniform distribution of
added deoxidizers and alloying elements, and also on the significant increase
in the duration of vacuum smelting. A new production technology for the
ShKh15 steel is presented in which complete deoxidation and alloying is con-
ducted in the ladle at the end of vacuum smelting. The suggested method is
theoretically substantiated. The results of the first experimental melts are
presented. 3 tables.

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1/3 027 UNCLASSIFIED PROCESSING DATE--FBNV70
TITLE--METHOD OF DETERMINATION OF REDUCTIBILITY OF UNFRESH AND INVETERATE
LUXATIONS OF THE CERVICAL VERTEBRAE -U-
AUTHOR--SELIVANOV, V.P. S
COUNTRY OF INFO--USSR
SOURCE--ORTOPEDIYA, TRAVMATOLOGIYA I PROTEZIROVANIE, 1970, NR 6, PP 8-12
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--BONE DISEASE, ORTHOPEDIC SURGERY, RADIOGRAPHY, MEDICAL
APPARATUS
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3003/0692 STEP NO--UR/9115/70/000/006/0008/0012
CIRC ACCESSION NO--APO129961
UNCLASSIFIED

2/3 027 UNCLASSIFIED PROCESSING DATE--13NOV70
CIRC ACCESSION NO--AP0129961

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE INCIDENCE OF UNFRESH AND INVETERATE DISPLACEMENTS OF CERVICAL VERTEBRAE IS STILL HIGH IN PRACTICE. THE EFFICIENCY OF THEIR CORRECTION DECREASES WITH INCREASE OF DELAY BETWEEN TRAUMA AND REDUCTION. OF 427 PATIENTS WITH LUXATIONS AND SUBLUXATIONS OF THE CERVICAL VERTEBRAE OBSERVED AT THE CLINIC, IN 21.7PERCENT THE LUXATIONS WERE UNFRESH, AND IN 18.7PERCENT INVETERATE. THE MAIN CAUSES OF INVETERITY OF LUXATIONS WERE ERRORS IN PRIMARY DIAGNOSIS (IN 50PERCENT), FAILURES AT ATTEMPTS OF REDUCTION AND LATE DETECTION AND CORRECTION OF REDISPLACEMENTS AFTER REDUCTION. REDUCTION OF LUXATIONS BY CLOSED METHODS WAS SUCCESSFUL IN FRESH CASES IN 91PERCENT, UNFRESH IN 66PERCENT AND INVETERATE IN 51PERCENT OF PATIENTS. THE CLINICO ROENTGENO GRAPHIC STUDIES REVEALED THAT REDUCTION OF UNFRESH AND INVETERATE LUXATIONS WAS EFFECTIVE ONLY IN CASES WITH PRESERVED MOBILITY IN THE INJURED LOCOMOTOR SEGMENT OF THE SPINE, WHICH COULD BE DEMONSTRATED BY SPONDYLORENTGENOGRAPHY DURING TRACTION APPLIED TO THE HEAD THROUGH A GLISSON HALTER. THE AUTHOR USES SPONDYLORENTGENOGRAPHY WITH TRACTION FOR DIAGNOSTIC PURPOSES SINCE 1962. IN THE PRESENCE OF MOBILITY IN THE DAMAGED LOCOMOTOR SPINE SEGMENT, ONE STAGE CLOSED REDUCTION WAS UNDERTAKEN IN 39 PATIENTS WITH REMOTENESS OF SUBLUXATIONS AND LUXATIONS COVERING A PERIOD OF FROM 8 DAYS TO 1.5 YEARS. COMPLETE REDUCTION WAS ACHIEVED IN 27, AND PARTIAL IN 12 PATIENTS.

UNCLASSIFIED

3/3 027

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0129561

ABSTRACT/EXTRACT--IN 37 PATIENTS OUT OF 39, THE SUBSEQUENT RATIONAL AND SUFFICIENTLY PROLONGED IMMOBILIZATION RESULTED IN SPONTANEOUS STABILIZATION OF THE INJURED LOCOMOTOR SEGMENT WHICH EXCLUDED THE NECESSITY OF SPONDYLODESIS OR ANY OTHER FIXATION BY OPERATIVE METHODS.

FACILITY: KAFEDRY TRAVMATOLOGII I ORTOPEDII NOVOKUZNETSKOGO INSTITUT USOVERSHENSTVOVANIYA VRACHEY.

UNCLASSIFIED

1/2 025 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--CALCULATION OF THE MINIMUM VENTILATION VOLUME REQUIREMENT FOR
SPECIAL INSULATING EQUIPMENT -U-
AUTHOR--SELIVANDY, V.V. S
COUNTRY OF INFO--USSR
SOURCE--KOSMICHESKAIA BIOLOGIIA I MEDITSINA, VOL 4, JAN.-FEB 1970, P.
34-38
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--SPACE MEDICINE, SPACE SUIT VENTILATION, ATMOSPHERE POLLUTION,
ATMOSPHERIC CONTAMINATION

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1997/1968 STEP NO--UR/0453/70/004/000/0034/0038
CIRC ACCESSION NO--AP0120611
UNCLASSIFIED

2/2 025

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0120611

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. DESCRIPTION OF A PROCEDURE FOR
CALCULATING THE MINIMUM VENTILATION VOLUME REQUIREMENT OF A SPACE SUIT
FOR VARIOUS LEVELS OF INDIVIDUAL SPACE SUIT AIR POLLUTANTS AND THEIR
MIXTURES. FORMULAS ARE DERIVED FOR DETERMINING THIS REQUIREMENT FOR
VARIOUS INTENSITIES AND LOCATIONS OF GAS DISCHARGES FROM THE BODY.

UNCLASSIFIED

USSR

UDC: 8.74

SELIVANOV, Yu., KLEANDROV, D.

"Prediction Method and Program Utilizing a Procedure of Generalized Exponential Smoothing"

V sb. Elektronno-vychisl. tekhn. i programir. (Electronic Computer Technology and Computer Programming--collection of works), vyp. 4, Moscow, "Statistika", 1971, pp 40-49 (from RZh-Kibernetika, No 1, Jan 72, Abstract No 1V1056)

Translation: On the stage of compilation of a preliminary national economic plan, it is necessary to study the plan by the economic planning methods described in this article. Authors' abstract.

1/1

- 51 -

1/2 016 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--COMPOSITION FOR SURFACING -U-
AUTHOR--(03)-CHETVERIKOV, P.I., SELIVANOV, YU.A., YEGOROV, A.M.
COUNTRY OF INFO--USSR
SOURCE--U.S.S.R. 263,783
REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZITSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--10FEB70
SUBJECT AREAS--MATERIALS
TOPIC TAGS--METALLURGIC PATENT, CORUNDUM, CHROMIUM CONTAINING ALLOY,
CARBON ALLOY, NICKEL CONTAINING ALLOY, SILICON CONTAINING ALLOY, IRON
CONTAINING ALLOY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAHE--3003/1064 STEP NO--UR/0482/70/000/000/0000/0000
CIRC ACCESSION NO--AA0130099
UNCLASSIFIED

2/2 016

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AA0130099

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A COMPN. FOR SURFACING CONTAINS

12-13PERCENT FUSED CORUNDUM POWDER, 75-6PERCENT SORMAIT (CR,C,NI,SR
FERROUS ALLOY), AND 11-13PERCENT FLUX. FACILITY: ALTAISEL MASH,
PLANT.

UNCLASSIFIED

72 035 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--STUDY OF DYNAMICS OF BUBBLE BOILING OF WATER ON FINE WIRES UNDER
CONDITIONS OF FREE CONVECTION -U-
THOR--(05)-SUBBOTIN, V.I., KAZONVSKIY, S.P., KOROTAYEV, S.K., SVIRIDENKO,
V.YE., SELIVANOV, YU.F.
COUNTRY OF INFO--USSR
SOURCE--AT. ENERG. (USSR) 28, 9-13 JAN 1970 .
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS
PIC TAGS--BOILING, FLUID DYNAMICS, GAS DYNAMICS, CONVECTION
ATTACHMENT--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
COPY FEEL/FRAME--1979/1596 STEP NO--UR/0089/70/028/000/0000/0013
AC ACCESSION NO--4P0047918
UNCLASSIFIED

1/2 R35

UNCLASSIFIED

PROCESSING DATE--18SEP70

RC ACCESSION NO--AP0047918
STRACT/EXTRACT--(U) GP-0- ABSTRACT. A CINEMATOGRAPHIC STUDY OF THE
PROCESS OF BUBBLE BOILING ON FINE WIRES UNDER THE CONDITIONS OF FREE
CONVECTION WAS CARRIED OUT. DIRECTIONS OF ESCAPING OF BUBBLES FROM THE
SURFACE OF A HEATER WERE DETERMINED. ON THE BASIS OF SOLVING THE
EQUATION OF MOTION OF A BUBBLE AND BY A MEASUREMENT OF THE DISTANCE
PASSED BY IT IN THE DIRECTION OPPOSITE TO THAT OF THE ACTION OF THE
LIFTING FORCE, FROM THE MOMENT OF ESCAPING TILL FULL STOP, THE VALUE OF
KINETIC ENERGY NECESSARY FOR OVERCOMING THE GRAVITATIONAL FORCES IS
DETERMINED. THE CONCLUSION IS MADE ABOUT A NONGRAVITATIONAL NATURE OF
FORCES, CAUSING ESCAPING OF A VAPOR BUBBLE FROM THE SURFACE OF A HEATER.
SOME HYPOTHESES CONCERNING THE NATURE OF THESE FORCES HAVE BEEN
PROPOSED.

UNCLASSIFIED

USSR

UDC 612.821.6+615.78

MURAV'YEVA, N. P., and SELIVANOVA, A. T., Physiology Department imeni I. P. Pavlov, Institute of Experimental Medicine, Academy of Medical Sciences USSR, Leningrad

"The Effects of Some Neurotropic Drugs on Mechanisms Controlling Complex Rhythmic Stereotypes"

Moscow, Zhurnal Vysshey Nervnoy Deyatel'nosti imeni I. P. Pavlov, Vol 23, No 1, Jan/Feb 73, pp 75-81

Abstract: Administration of drugs acting on central H-cholinoreactive systems (pediphen) and on adrenoceptors (chlorpromazine and amphetamine), or anticholinesterase compounds (armin and nibufine), and of an analeptic (caffeine) does not disturb conditioned alimentary reactions of the acoustic rhythmic-mosaic type in dogs (salivation and locomotion toward food pan in response to metronome sounds of certain frequencies, with and without reinforcement). On the other hand, after administration of amytil, which blocks M-cholinoreactive structures in the brain cortex, the effect of the conditioned stimuli is no longer determined by the rhythmic stereotype but by each stimulus separately. This indicates that M-cholinoreactive structures are of prime significance in the mechanisms regulating mutual interaction between cortical and subcortical

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- 26 -

USSR

MURAV'YEVA, N. P. and SELIVANOVA, A. T., Zhurnal Vysshey Nervnoy Deyatel'nosti imeni I. P. Pavlov, Vol 23, No 1, Jan/Feb 73, pp 75-81

areas. The M-cholinoreactive structures are blocked, the functional cortical-subcortical correlation established and simplified during conditioning is disrupted, and therefore the regulatory role of the unconditioned stimulus in the development of systemic nervous processes is temporarily abolished.

2/2

USSR

615.217.32.813.1.015.4:612.833.81

GOLIKOV, S. N., SELIVANOVA, A. T., LEVSHUNOVA, M. A. and BARANTSEVICH, R. P.,
Leningrad

"The Mechanism of Armine Action on Conditioned Reflexes"

Moscow, Farmakologiya i Toksikologiya, Vol 35, No 2, Mar/Apr 72, pp 131-134

Abstract: Armine given to cats intramuscularly in doses of 3-5 mcg/kg shortens latency periods, speeds up reactions to stimuli, and increases general motor activity, while larger doses (10 mcg/kg) inhibit conditioned reflexes. Armine injected into the right motor cortex through an implanted tubule in doses of 5 mcg/kg slows down conditioned reflexes to light and sound stimuli and causes clonic twitches on the contralateral side. Larger doses (20 and 50 mcg/kg) completely inhibit conditioned reflexes, destroy coordinated motor activity, and cause epileptic seizures recurring for up to 6 months. Conditioned reflexes begin to reappear in a month, but complete recovery requires up to a year. Histological examinations of cortical slides obtained during the acute phase revealed neurons with ischemic degeneration and neurons with bleached cytoplasm and nuclei in the third, fourth, and fifth cortical layers at and around the site of injection.

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USSR

UDC 611.611:611.17:612.014.477

SELIVANOVA, L. M., Department of Normal Anatomy, First Leningrad Medical
Institute imeni Academician I. P. Pavlov

"Effect of Transverse Accelerations on the Renal Vessels"

Leningrad, Arkhiv Anatomii Gistologii i Embriologii, Vol 60, No 5, May 71,
pp 65-70

Abstract: Deformation of organs and tissues is connected with transversally applied gravitation stresses on the body. The effect on the vascular system of the kidneys was studied in this work. Preparations (104) from 52 male rabbits were used; six of the rabbits served as controls. Stresses in the spine - chest and chest - spine directions were applied by rotating the animals in an electrocentrifuge with a 1 m radius. Five series of experiments differing in the duration and intensity of the stresses to which the animals were subjected were performed including one series in which the effectiveness of preliminary training of the animals was studied. The renal vessels were studied by injection, preparation, and illumination. Histological methods were used also. A single application of endurable stress led to a measurable morphological changes such as contraction of the arteries, arterioles, and capillaries, a dilatation of the veins and an

USSR

SELIVANOVA, I. M., *Arkhiv Anatomii Gistologii i Embriologii*, Vol 60, No 5, May 71, pp 65-70

irregularity in the caliber of the vessels over their length. The peritubular vessels were contracted also; their diameter varied from 3 to 15 μ . The veins were dilated, with diameters of 120 μ . With single application of a lethal stress in the chest - spine direction, the sensitivity of the animals to the stress was different. Some animals died after 10 minutes, others after 3 hours; most perished within 50-60 minutes from the beginning of the experiment. Also the vascular changes were somewhat different. When the animals died after 10 minutes, an irregularity in the contours, a twisting of the vessels, broadening of the veins was observed, but arteries, arterioles, and peritubular capillaries were contracted. When the animals perished after 1 hour or more (from the beginning of the experiment), the contraction of large and medium arteries was slight, but dystonia of the vessels was observed, which indicated an irregularity in the width of the vascular lumen along the length of the vessels. The peritubular network was dense in some preparations and thin in others. A single application of stress in the spine - chest direction led to contraction of the arteries and capillaries and to a widening of the veins. With the irregularity

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USSR

SELIVANOVA, L. M., *Arkhiv Anatomii Gistologii i Embriologii*, Vol 60, No 5, May 71, pp 65-70

in vascular diameters, the network of peritubular vessels likewise was irregular. In the fourth series of experiments, a single application of prolonged transverse stresses in the spine - chest direction led to death within 30 minutes. The mucous membranes of the oral and nasal cavities were cyanotic. The veins were considerably enlarged. Arteries and arterioles were contracted and the irregularity in the vascular lumen was considerable; "interceptions" were found frequently. It was established that previous training of the animals enhances their capability of withstanding stresses of this type. Vascular changes in previously trained animals include contraction of peritubular vessels, but the irregularity in the vascular lumen was slight and, on the whole, the inter-organ vessels of the kidneys appeared similar to those of the control animals.

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UDC 621.762.242

USSR

DVORINA, L. A., and SELIVANOVA, N. F., Institute of Problems of Material Sciences, Academy of Sciences Ukr SSR

"Preparation of Powders From Iron, Cobalt, and Nickel Disilicides"

Kiev, Poroshkovaya Metallurgiya, No 1 (97), Jan 71, pp 5-10

Abstract: A study was made of the conditions of preparing iron, cobalt, and nickel disilicides by direct interaction of metal powders with silicon in an argon environment and in a vacuum and also by vacuum-thermal reduction of the oxides and carbonates of the corresponding metals. Evaluations were made by X-ray, chemical, and metallographic analyses. The method of synthesis of the disilicides from elements was studied from the standpoint of the mechanism of formation of silicide phases. Inasmuch as iron, cobalt, and nickel have identical structure of the outer electron shell and identical properties, the formation of cobalt disulfide was studied in the greatest detail, and the data obtained were used for detailed study of the formation of iron and nickel disilicides.

The results of obtaining cobalt disilicide from elementary silicon and cobalt, the results of studying the conditions for obtaining iron disilicide

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USSR

DVORINA, L. A., and SELIVANOVA, N. V., Poroshkovaya Metallurgiya, No 1 (97), Jan 71, pp 5-10

by silicon-thermal reduction of $\text{Fe}_2\text{O}_3 + 7 \text{Si} = 2 \text{FeSi}_2 + 3 \text{SiO}$, and the results of studying the conditions of obtaining cobalt disilicide by silicon thermal reduction from the carbonate are tabulated. The use of carbonate salts of the metals as the initial raw material has a number of advantages. On removal of the carbon dioxide gas formed during dissociation of the carbonates, loosening of the reaction mixture takes place which increases the strength, prevents clogging of the pores, and promotes complete removal of the silicon monoxide formed. The metal monoxide formed during decomposition of the carbonates has high chemical activity and interacts with the silicon at lower temperatures than the oxide used as the initial raw material. The reaction temperature is thus lowered to 100-200°C.

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1/2 018
UNCLASSIFIED
TITLE--PECULIARITIES OF FORMATION OF RHYTHMIC MOSAIC SYSTEMS OF
SITUATIONAL CONDITIONED REFLEXES -U-
AUTHOR--SELIVANOVA, A.T.
COUNTRY OF INFO--USSR
SOURCE--ZHURNAL VYSSHEY NERVNOY DEYATEL'NOSTI, 1970, VOL 20, NR 3, PP
533-540
DATE PUBLISHED-----70
SUBJECT AREAS--BEHAVIORAL AND SOCIAL SCIENCES, BIOLOGICAL AND MEDICAL
SCIENCES
TOPIC TAGS--CONDITIONED REFLEX, NEUROPHYSIOLOGY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1997/1926
STEP NO--UR/0247/T0/020/003/0533/0540
CIRC ACCESSION NO--AP0120574
UNCLASSIFIED

2/2 018

CIRC ACCESSION NO--AP0120574

UNCLASSIFIED

PROCESSING DATE--23OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. BY MEANS OF THE KUPALOV SITUATIONAL CONDITIONED REFLEXES TECHNIQUE, A RHYTHMIC MOSAIC SYSTEM OF REFLEXES WAS ELABORATED IN EIGHT DOGS TO VARIOUS FREQUENCIES OF METRONOME STROKES (POSITIVE REFLEXES TO 120, 180, 240 AND 300 STROKES PER SEC. AND NEGATIVE TO 60, 150, 210 AND 270 STROKES). THE FORMATION OF THE SYSTEM PROCEEDED THROUGH STAGES OF GENERALIZATION WITH ULTRAPARADOXAL RELATIONS, SPECIALIZATION AND STABILIZATION OF CONDITIONED REFLEXES. DURING THE FORMATION OF RHYTHMIC SYSTEMS EXCITATORY PROCESSES PREVAILED OVER INHIBITORY ONE. TRAINING AND CONDITIONED CONSOLIDATION OF INDUCTION MECHANISMS IN A PROLONGED EXPERIMENT HELPED TO SET UP RHYTHMIC SYSTEMS, PARTICULARLY IN DOGS USED IN THE EXPERIMENT FOR THE FIRST TIME. IN ANIMALS WITH TRAINED NERVOUS PROCESSES, THE MOSAIC SYSTEMS WERE ELABORATED SLOWER, THROUGH A SUCCESSIVE CHANGE IN ALL THE LINKS OF THE PREVIOUSLY FORMED SYSTEM. REGULATION OF STABILIZED SYSTEMIC NERVOUS PROCESSES WAS MAINLY ACHIEVED BY THE SUBCORTICAL FORMATIONS (UNCONDITIONED STIMULUS).
FACILITY: PAVLOV PHYSIOLOGY DEPARTMENT, INSTITUTE OF EXPERIMENTAL MEDICINE, USSR ACADEMY OF MEDICAL SCIENCES, LENINGRAD.

UNCLASSIFIED

Acc. Nr:

APC047328

Ref. Code: UR 0300

PRIMARY SOURCE: Ukrayns'kiy Biokhimichniy Zhurnal, 1970,
Vol 42, Nr 1, pp 39-43

SPECTROPOLARIMETRIC CHARACTERISTICS OF ALBUMIN
AND GLOBULIN WITH THYROID TOXICOSIS

K. E. Seligmanov, Yu. N. Gordeev, G. V. Troitsky

Departments of Biochemistry and Hospital Therapeutics,
the Crimean Medical Institute, Simferopol

Summary

Conformation changes of albumin and γ -globulin of blood serum were studied in 26 patients with thyroid toxicosis of different degree of gravity and in five healthy persons. Proteins were isolated by the method of the preparative electrophoresis in the agar-agar gel. Homogeneity of proteins was confirmed by paper electrophoresis. Optical rotation was measured by means of a photoelectrical spectropolarimeter. Unusually great variation of a_D and b_D was found.

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19790850

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The spectropolarimetric investigations of blood proteins in patients with thyroid toxicosis made it possible to observe the conformation changes in albumin and γ -globulin. Parallelism is marked between the degree of disease gravity and changes in protein conformation. The most essential changes occurred in a molecule of γ -globulin.

The found qualitative changes in proteins may be of definite biological interest from the view point of the effect of thyroid gland hormones on biosynthesis of proteins.

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19790851

Edh

172 017 UNCLASSIFIED PROCESSING DATE--11DEC70
TITLE--THERMAL STABILITY OF ACIDIC SODIUM SELENITES --U-
AUTHOR--(U4)--SELIVANOVA, N.M., KOSHCHINA, Z.V., ANANINA, M.S.,
KHUTUKYANSKIY, F.M.
COUNTRY OF INFO--USSR
SOURCE--ZH. PRIKL. KHIM. (LENINGRAD) 1970, 43(5), 975-81
DATE PUBLISHED-----7C
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--THERMAL STABILITY, SODIUM COMPOUND, SELENIDE, X RAY ANALYSIS,
THERMAL ANALYSIS, SODIUM OXIDE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3004/0951 STEP NO--UR/0080/70/043/005/0975/0981
CIRC ACCESSION NO--AP0131536
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--11DEC70

2/2 017
CIRC ACCESSION NO--AP0131536
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CURVE OBTAINED FROM THE DTA
ANAL. OF NAHSED SUB3 HAS 4 ENDOTHERMAL POINTS WITH MAX. AT 114, 343,
615, AND 710DEGREES. THERMOGRAVIMETRIC, CHEM., AND X RAY ANAL. ALLOWED
THE MAX. TO BE ASCRIBED TO THE FOLLOWING PROCESSES: (1) 2NAHSED SUB3
YIELDS NA SUB2 SE SUB2 O SUB5 PLUS H SUB2 O, (2) MELTING OF NA SUB2 SE
SUB2 O SUB5, (3) NA SUB2 SE SUB2 O SUB5 YIELDS NA SUB2 SE SUB3 PLUS SE
SUB2 AND, (4) MELTING OF NA SUB2 SE SUB3 WITH PARTIAL DECOMPN. THE DTA
CURVES OF NAH SUB3 (SE SUB3) SUB2 HAVE MAX. AT 114, 350, 608, AND
710DEGREES. THE 1ST MAX. CORRESPONDS TO 2(NAHSED SUB3 P SUB2 SE SUB3)
YIELDS NA SUB2 SE SUB2 O SUB5 PLYS 2SE SUB2 PLYS 3H SUB2 O AND MAX. 2-4
ARE ATTRIBUTED TO THE SAME PROCESSES AS IN THE CASE OF NAHSED SUB3.
DECOMPN. PRODUCTS OF BOTH SALTS HEATED TO 1100DEGREES ARE COMPOSED
MAINLY OF NA SUB2 O.

UNCLASSIFIED

1/2 015
TITLE—HEAT OF FORMATION OF LITHIUM TRIHYDROGEN SELENITE —U—
AUTHOR—(02)—ROSHCHINA, Z.V., SELIVANOVA, N.M.
COUNTRY OF INFO—USSR
SOURCE—IZV. VYSSH. UCHEB. ZAVED., KHIM. KHIM. TEKHNOL. 1970, 13(1), 3-5
DATE PUBLISHED—70
SUBJECT AREAS—CHEMISTRY
TOPIC TAGS—SELENIDE, HYDROGEN COMPOUND, HEAT OF FORMATION, LITHIUM COMPOUND
CONTROL MARKING—NO RESTRICTIONS
DOCUMENT CLASS—UNCLASSIFIED
PROXY REEL/FRAE—1993/1911
STEP NO—UR/0153/70/013/001/0003/0005
SECTION NO—AT0114351
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--09OCT70

2/2 015

CIRC ACCESSION NO--AT0114351

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE STD. HEAT OF FORMATION OF LIH SUB3 (SO SUB3) SUB2 (I), D PRIME25. EQUALS 3.212, AT 25PERCENT IS MINUS 327.8 PLUS OR MINUS 0.4 KCAL-MOLE, FROM THE REACTION BETWEEN CRYSTN. PBIND SUB3) SUB2 WITH A 1:800 WATER SOLN. OF I AT 25PERCENT, FOR WHICH THE HEAT OF REACTION IS 13.412 PLUS OR MINUS 0.01 KCAL-MOLE, AND THE HEAT OF SOLN. OF I AT 1:800 CONC. IS 9.665 PLUS OR MINUS 0.02 KCAL-MOLE. THE HEAT OF FORMATION OF PBSE0 SUB3 IS ASSUMED TO BE MINUS 127.89 KCAL-MOLE. THE STD. HEAT OF FORMATION OF I FROM LIHSE0 SUB3 AND H SUB2 SE0 SUB3 IS CALCD. AS 5.8 KCAL-MOLE. THIS VALUE IS CLOSE TO THAT FOR THE CORRESPONDING NA SALT. FACILITY: MOSK. KHIM.-TEKHNOZ. INST. IM. MENDELEEVA, MOSCOW, USSR.

UNCLASSIFIED

1/2 020 UNCLASSIFIED PROCESSING DATE--02OCT70
TITLE--HEAT OF FORMATION OF POTASSIUM AND MAGNESIUM SELENATE (SELENIUM
ANALOG OF SCHOENITE) K SUB2 MG(SEO SUB4) SUB2 AND 6H SUB2 O -U-
AUTHOR--(02)-PRIMOVA, L.A., SELIVANOVA, N.M.
COUNTRY OF INFO--USSR
SOURCE--ZH. FIZ. KHIM. 1970, 44(2), 507-8
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--HEAT OF FORMATION, CRYSTAL HYDRATE, CALORIMETRY, POTASSIUM
COMPOUND, MAGNESIUM COMPOUND, SELENATE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1987/0954 STEP NO--UR/0076/70/044/002/0507/0508
CIRC ACCESSION NO--AP0104290
UNCLASSIFIED

2/2 020

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0104290

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE HEAT OF FORMATION, DELTA H DEGREES SUB298, OF CRYST. K SUB2 MG(SED SUB4) SUB2 AND 6H SUB2 O FORMED FROM ITS ELEMENTS, DETD. CALORIMETRICALLY, WAS MINUS 939.8 PLUS OR MINUS KCAL-MOLE.

89

NOT ACCEPTED

USSR

TAUTS, M. I., SELIVANOVA, T. M., and SEMENENKO, V. Ye., Institute of Plant Physiology imeni K. A. Timiryazev, Academy of Sciences USSR, Moscow

"Interpretation of the Self-Stimulating Effect of Chlorella Growth"

Moscow, Fiziologiya Rasteniy, Vol 18, No 1, Jan/Feb 71, pp 69-77

Abstract: The presence of indolyl-3-acetic acid in the extracellular metabolites of a bacteria-free culture of the thermophilic Chlorella sp. K strain was demonstrated on the basis of chromatographic analysis, determination of R_f of the spots in various solvent systems, fluorescence of the spots in ultraviolet light, color tests, UV spectra, and the effect of the growth regulator on wheat coleoptiles and algae. An unknown biologically active substance (or substances), probably of an indole nature, was also found. It was invariably present on the chromatograms, where it produced a wide range of color reactions. The indole compounds stimulated the growth of both algae and wheat coleoptiles, suggesting that hormones are involved in the processes of intracellular regulation. The physiological significance of the compounds in the activity of unicellular algae was confirmed by their positive response to exogenous indolyl-3-acetic acid.

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- 17 -

USSR

TAUTS, M. I., et al., Fiziologiya Rasteniy, Vol 18, No 1, Jan/Feb 71, pp 69-77

The optimum concentration to stimulate cell division in the culture and to increase the culture's productivity varies with the physiological condition of the culture.

2/2

SELIVANOVA, V.A.

SPRS 59208
6-73

3

VII-5a. THE STRUCTURE OF SINGLE GALLIUM ARSENIDE CRYSTALS GROWN FROM A MELT
Article by V. A. Selivanova, N. V. Serkov, V. V. Kozik, Tomskiye Novosti
III Sbornik po Fiziko-khimii i sintezu Poluprovodnikov Kristallov 1
Moscow, Russia, 12-17 June 1972, p 105

A study was made of the structure of single crystals of gallium arsenide
using metallographic, chemical and electron microscopic methods. The presence
of the fine structure of several types was demonstrated. A comparison of the
fine structure with the morphology of the crystallization front surface and
the growth conditions permits judgment of the kinetics and mechanism of crys-
tallization. The dependence of the kinetics and mechanism of crys-
tallization, in our opinion, by the parameters of growth from a melt.

SELIVANOVA, V.A.

JPRS 59368
6.73

VIII-5b. OBTAINING HOMOGENEOUS SOLID SOLUTIONS OF $\text{Ga}_{1-x}\text{In}_x$ -As FROM A MELT
[Article by V. A. Selivanova, G. A. Shmalova, A. M. Gershteyn, V. M. Gupleva,
Izvestiya Akad. Nauk SSSR, Seriya Fiziko-Matem. Nauki, 1977, No. 1, p. 106]
Mirovaya Kristallografiya, Moscow, 1977, p. 106]

At the present time studies have been made of the structural and electrical properties of single crystals of the solid solution $\text{Ga}_{1-x}\text{In}_x$ -As depending on the crystallization conditions from the melt. It is demonstrated that the structural nonuniformity of solid solutions caused by nonuniform distribution of indium and nonuniformity of the crystallization and exhibited in faceted and other defects, has an essential effect on the electrical properties of the material and is holding up practical use of it in a number of semiconductor devices. As a result of complex studies of the structure, composition and electrical and optical properties of single crystals of solid solutions obtained by various procedures from the melt and subjected to different methods of temperature annealing, the conditions were determined with particular attention to the effect of the alloy dispersion causing electrophysical properties is directly dependent on the crystallization and homogenization conditions of the solid solutions. The basic optimal conditions of attaining the disorderliness in the alloy lattice based on As_2 are presented.

SELYANOVA, V.A.

SPR 5 5908
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XL-13 CHARACTERISTIC FEATURES OF OBTAINING EPITAXIAL FILMS OF SOLID SOLUTIONS OF $\text{Ga}_{1-x}\text{In}_x\text{As}$

Article by V. A. Selyanova, V. N. Gupikov, Irmsk: Novosibirsk, Ili Sibirskii na Protsessy i Sinter Poluprovodnikov Kriсталлов i Filmov, Kazan, 12-17 June 1972, p 159

At the present time a study was made of the structural characteristics of epitaxial layers of $\text{Ga}_{1-x}\text{In}_x\text{As}$ grown from the solution in the melt. The investigation of indium and gallium in the alloy was investigated by means of a microanalyser and cathode luminescence and the dislocation distribution. The values of the discontinuity in the interfacial intensity and the electric physical properties were estimated as a function of the conditions of obtaining crystals of solid solutions and temperature annealing. It was demonstrated that the uniformity of the epitaxial films and their properties are improved in the process of thermal annealing of solid solutions at high temperatures and especially when combining the latter with the crystallization process. The optical crystallization conditions and the temperature homogenization of the solid solutions are presented in the paper.

Acc. Nr: **170034403**

Ref. Code: UR 0297

PRIMARY SOURCE: Antibiotiki, 1970, Vol 15, Nr 2, pp 181-185
 LEVELS OF ASCORBIC ACID IN BLOOD PLASMA AND URINE AND RESISTANCE
 OF SKIN CAPILLARIES IN PERSONS OCCUPIED IN STREPTOMYCIN PRODUCTION

V. M. Selivanova, N. P. Dobronravova, L. M. Chelnokova

National Institute for Vitaminology, Moscow

Examination of more than 100 persons (mainly women) at the age of 18 to 40 occupied in streptomycin production showed relatively low levels of ascorbic acid in blood plasma and resistance of their skin capillaries. Additional vitaminization of the workers for 2.7 and 10.5 months with vitamin complexes, containing 70 or 150 mg of vitamin C, 1.5 mg of vitamin A, 1.7 mg of vitamin B₁, 2.2 mg of vitamin B₂, 18 mg of vitamin PP and 2 mg of vitamin B₆ did not increase the ascorbic acid levels in blood plasma, while the acid excretion with morning urine significantly increased. The tonic effect on the capillaries was observed only with a complex containing 150 mg of vitamin C. Addition of tea catechins in an amount of 90 mg a day did not increase the effect. Vitamin complexes containing 70 and 150 mg of vitamin C had no tonic effect on the capillaries of workers occupied in streptomycin production. It is concluded that additional vitaminization of workers occupied in streptomycin production with the above vitamin complex containing 150 mg of vitamin C is necessary.

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1/2 025 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--NEROBOL AND PREDNISOLONE ACTION ON THE DEVELOPMENT OF INTERARTERIAL
ANASTOMOSES IN EXPERIMENTAL MYOCARDIAL INFARCTION -U-
AUTHOR-(02)-SELIVENSTOV, S.A., SIDOROVICH, YE.I.

COUNTRY OF INFO--USSR

SOURCE--FARMAKOL. TOKSIKOL. (MOSCOW) 1970, 33(1), 48-51

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--HARMONE, ARTERIAL ANASTOMOSIS, MYOCARDIUM, HEART DISEASE, CAT,
ELECTROCARDIOGRAPHY, CORONARY BLOOD CIRCULATION

CONTROL MARKING--NO RESTRICTIONS .

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--1994/1176

STEP NO--UR/0390/70/033/001/0048/0051

CIRC ACCESSION NO--AP0115195

UNCLASSIFIED

2/2 025

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0115195

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. NEROTOL (10 MG-KG ORAL) AND, TO A LESSER EXTENT, PREDNISOLONE (5 MG-KG I.M.) ADMINISTERED DAILY FOR 25 DAYS TO CATS WITH EXPTL. MYOCARDIAL INFARCTION (INDUCED BY LIGATION OF THE ANTERIOR DESCENDING BRANCH OF THE LEFT CORONARY ARTERY) STIMULATED THE DEVELOPMENT OF INTERARTERIAL ANASTOMOSES IN THE MYOCARDIUM. THIS IMPROVED COLLATERAL BLOOD CIRCULATION IN THE CARDIAC MUSCLE, IMPROVED THE ELECTROCARDIOGRAM DYNAMICS, AND DECREASED THE SEVERITY OF ADHESIONS DEVELOPING BETWEEN THE PERICARDIUM AND NECROTIC AREAS IN THE MYOCARDIUM.

FACILITY: LAB. FARMAKOL. SERDECHNO SOSUDISTOI SISTEMY. INST. FARMAKOL. KHIMIOTER., MOSCOW, USSR.

UNCLASSIFIED

1/2 022
TITLE--PATHOGENESIS OF GYNECOMASTIA OF VARIOUS ORIGINS -U-
AUTHOR--SELVEROVA, N.B.
COUNTRY OF INFO--USSR
SOURCE--PROBL. ENDOKRINOL. 1970, 16(2), 52-6
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--GONADOTROPIN, ESTROGEN, URINE, REPRODUCTIVE SYSTEM, ENDOCRINE, SYSTEM DISEASE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1996/0599
CIRC ACCESSION NO--AP0117827
STEP NO--UR/0502/70/016/002/0052/0056
UNCLASSIFIED

2/2 022
CIRC ACCESSION NO--AP0117827

UNCLASSIFIED

PROCESSING DATE--16OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TOTAL GONADOTROPINS (I), FSH, LH, ESTROGENS (II), AND 17 KETO STEROIDS (III) WERE DETD. IN THE URINE OF 45 PATIENTS WITH GYNECOMASTIA DUE TO HYPOGONADISM, KLEINFELTER'S SYNDROME, OR PUBERTO JUVENILE PITUITARY DEFICIENCY OR WITH JUVENILE GYNECOMASTIA. THE EXCRETION OF FSH WAS INCREASED, AND THAT OF LH WAS NORMAL IN ALL CASES, COMPARED TO 10 HEALTHY MEN. II WAS NORMAL IN JUVENILE GYNECOMASTIA, AND ELEVATED IN THE OTHER CASES. THE URINARY EXCRETION OF I, AND III WAS NOT AFFECTED IN GYNECOMASTIA. FACILITY: TERAP. OTD., INST. EKSP. ENDOKRINOL. KHIM. GORMON., MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC: 681.332.65
SELIVERSTOV, A. I., BELOV, L. I., LEDOVSKIY, V. N., PYSIN, V. D., AFANAS'YEV,
V. I.

"A Random Pulse Sequence Generator"

USSR Author's Certificate No 284022, filed 23 Dec 68, published 23 Dec 70
(from RZh-Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 10, Oct
71, Abstract No 10B217 P)

Translation: The device is designed for generating random electrical signals which have predetermined statistical characteristics and shaping pulses which are random with respect to times of appearance, duration, and amplitude. The generator can be used in mathematical modeling of various natural phenomena, technical devices, etc. Well-known random pulse sequence generators contain a source of noise which sends signals to a mixer through two channels, one of which contains two series-connected, transistorized blocking generators, while the other contains a transistorized blocking generator, a peak detector, and a smoothing filter. However, such generators are constructed on the principle of multiple amplification and limitation of the noise voltage from above and below, which causes appreciable complica-

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USSR

SHELIVERSTOV, A. I., Soviet Patent No 284022

tion of the device; besides this, a change in the pulse repetition frequency in such devices inevitably leads to a change in the duration of these pulses, which is undesirable in a number of instances. The proposed device is distinguished as follows: A delay element is connected through a two-pole switch between the transistors of the blocking generators in the first channel. A controlling transistor is connected in the emitter circuit of the transistorized blocking generator in the first channel, whose output is connected to the mixer. A control signal from the smoothing filter in the second channel is sent to the base of the transistor, resulting in independent regulation of the number of pulses per unit of time and their pulse length. One illustration.

USSR

UDC 535.376:621.382

DOTSENKO, Yu. V., SELIVERSTOV, D. M., SHESTERNEV, A. N.

"Temporal Characteristics of GaP Semiconductor Diodes"

Tr. 7-y Konferentsii po yadern. elektron. T.1, Ch.4 (Works of the 7th Conference on Nuclear Electronics, Vol 1, Part 4), Moscow, Atomizdat, 1970, pp 313-322 (from RZh--Elektronika i yeye primeneniye, No 5, May 1971, Abstract No 5B233)

Translation: A study is made of the form of light pulses of GaP luminescent diodes (LD) applicable as simulators of pulsed radiation during investigation of the temporal characteristics of a photomultiplier. The glow of the LD was excited by current pulses of rectangular form with an intrinsic rise time of ~ 4 nsec and was registered with the aid of a Type K 14 FS-50 photomultiplier, the signal from the anode of which was transmitted on a matched line to a S-I-II oscilloscope (intrinsic time of amplifier ~ 5 nsec). The oscillographs inspected show that both fronts of the light pulse of the LD consist of two components with relaxation times of 30 and 100 nsec. With inverse connected the relaxation time is ≤ 10 nsec. The delay of the LD glow with respect to the moment of admission of the signal and the divergence

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DOTSENKO, Yu. V., et al., Tr. 7-y Konferentsii po yadern. elektron. T.1, Ch.4 (Works of the 7th Conference on Nuclear Electronics, Vol 1, Part 4), Moscow, Atomizdat, 1970, pp 313-322 (from RZh--Elektronika i yeye primeneniye, No 5, May 1971, Abstract No 5B233)

of the delay were investigated and shown to be smaller with an inverse connection. The halfwidth of the time distribution of the moments of triggering amounts to 0.15 nsec. 5 ill. 3 ref. N. S.

2/2

1/2 021 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--PREDNISOLONE ACTION ON THE BLOOD SUPPLY OF THE HEART --U-
AUTHOR--SELIVERSTOV, S.A.
COUNTRY OF INFO--USSR
SOURCE--FARMAKOL. TOKSIKOL, (MOSCOW) 1970, 33(2), 193-6
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--HORMONE, CAT, BLOOD CIRCULATION, OXYGEN CONSUMPTION,
MYOCARDIUM, BLOOD PRESSURE, BLOOD VESSEL, HEART

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1994/1166 STEP NO--UR/0390/70/033/002/0193/0196
CIRC ACCESSION NO--AP0115185
UNCLASSIFIED

2/2 021

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0115185

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PREDNISOLONE ADMINISTERED I.V. TO CATS AT 3 AND 5 MG-KG INCREASED THE BLOOD FLOW FROM THE CORONARY SINUS AND O CONSUMPTION BY THE HEART, WITH THE O SUPPLY BEING GREATER THAN ITS UTILIZATION IN THE MYOCARDIUM. INCREASED CORONARY BLOOD FLOW WAS INITIALLY ACCOMPANIED BY A RISE IN ARTERIAL PRESSURE, INCREASED CARDIAC RESPONSE, AND CARDIAC WORK WITHOUT CHANGES IN THE CORONARY VASCULAR RESISTANCE. AFTER 60-90 MIN THE TONUS OF THE CORONARY VESSELS DECREASED AND THE CARDIAC DIASTOLIC TIME INCREASED, AND CARDIAC RESPONSE AND WORK DECREASED, WITH NO SIGNIFICANT CHANGES IN THE CONTRACTILE ABILITY OF THE HEART MUSCLE. FACILITY: INST. FARMAKOL., MOSCOW, USSR

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